M057/0006

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State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

September 21, 2009

CERTIFIED RETURN RECEIPT
7005 2570 0000 4801 6799

Kent Butters
Towers Sand and Gravel
760 North Harrisville Road
Harrisville, Utah 84404

Subject: Second Review of Notice of Intention to Commence Large Mining Operations, Towers Sand and Gravel LLC and C. E. Butters Realty and Construction Inc., Towers Sand and Gravel Quarry, M/057/0006, Weber County, Utah

Dear Mr. Butters:

The Division has completed its review of your response to the Division's initial review of your Notice of Intention to Commence Large Mining Operations (NOI) for the Towers Sand and Gravel Quarry, located in Weber County, Utah, which was received July 6, 2009. The attached comments will need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion. *Please address only those items requested in the attached technical review by sending replacement pages* for the original mining notice using redline and strikeout text, so we can see what changes have been made and incorporate the changes into the NOI. After the notice is determined technically complete and we are prepared to issue final approval, we will ask that you send us two clean copies of the complete and corrected plan. Upon final approval of the permit, we will return one copy stamped "approved" for your records.

Questions about the review should be directed to the minerals program manager, Paul Baker at (801) 538-5261 or the Permit Lead, Lynn Kunzler at (801) 538-5261. After you have had a chance to review the comments, it may be desirable to set up a meeting where we can discuss the review. The Division will suspend further review of the NOI until your response to this letter is received.

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

UTAH DNR OIL, GAS & MINING

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Please submit a response to the review no later than December 1, 2009 in order to avoid further compliance action.

The Division has determined that the property you proposed as a collateral bond is not acceptable, primarily because it is within the affected area of the mine. It appears the property best suited to serve as a collateral bond is in the northeast part of the parcel designated by Weber County as 19-001-0015.

At this time, the Division does not have adequate information to do a detailed calculation of the reclamation surety, but until we have enough information to verify your calculations or to perform our own, we are willing to accept your estimate of $348,546.00 for 60 acres of disturbance. The actual amount may go up or down when a complete mine plan is available. After taking into account the bond the Division currently holds ($18,600.00), a 25 percent discount for market fluctuation, and a 10 percent discount for marketing, the value of the property used as collateral needs to be at least $445,427.00 ([$348,546 – 18,600] X 1.35 = $445,427).

It is essential that the Division be involved in a preliminary meeting with the appraiser. The appraiser must also fully understand the collateral bond requirements in the memorandum from Steve Alder:

1. The property must be unencumbered (a legal description for a separate parcel) with insured first deed to the State of Utah.
2. The appraised value, calculated by a certified independent appraiser, must be in excess of an amount that is 135 percent of the bond calculations.
3. The property must have legal access. If access is provided by a private right of way, the right of way must be sufficient to satisfy requirements of Pleasant View City for the proposed use listed in the appraisal, and the acreage in the right of way is not to be included in the value of the collateral parcel.
4. The property must not be included in the mine permit area. (This may require you to change the current permit area).
5. The property must not be encumbered by easements or restrictions, such as roads or utility easements that would preclude the highest and best use.
6. The value will be subject to re-evaluation at least every five years or as changes in operations warrant.

Please select an approximate area that you feel would meet these criteria after which we would like to arrange another on-site meeting with the appraiser. We would like to schedule the meeting no later than October 15, 2009.

Questions about the appraisal process should be directed to Paul Baker, Minerals Program Manager, at (801) 538-5261, or to Dana Dean, P. E., Associate Director of Mining, at (801) 538-5320. Thank you for your cooperation.

Sincerely,

John Baza
Director

JB:lk:vs
Attachment: 2nd Review
Cc Paul Baker, DOGM
Steve Alder, AG's Office
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REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Towers Sand and Gravel and C. E. Butters Realty and Construction
Towers Sand and Gravel Quarry
M/057/0006
September 21, 2009

General Comment:

In responding to this review, PLEASE submit revised pages and maps for the original NOI. Use redline/strikeout (or other similar type of highlighting) to show corrected text. Please use Form MR-REV to document the changes made, whether they are replacing, removing or adding pages and/or maps. This form is available on the Division's web page at: http://www.ogm.utah.gov/minerals/MINERALSFORMS.htm)

Your response to our last review may have clarified questions the reviewer had, but failed to correct the NOI. Until changes are made in the NOI, the Division cannot approve your operation. As stated in correspondence, once the NOI is properly revised and is ready to approve, the Division will ask you send two 'clean' copies. These will be stamped approved, and one copy will be returned to you for your official record and future amendments.

R647-4-104 – Operator's, Surface and Mineral Ownership

Two operators are listed for this mining operation, Towers Sand and Gravel LLC and C. E. Butters Realty and Construction, Inc. "Towers Sand and Gravel LLC" is not registered with the Division of Corporations, but "Tower Sand and Gravel LLC" is. While this is probably a typographical error, it needs to be corrected, either with the Division of Corporations or on the application.

As per the definition of an operator (see Rule R647-1-106, which states in part):
. . . any natural person, corporation, association, partnership, receiver, trustee, executor, administrator, guardian, fiduciary, agent, or other organization or representative of any kind, either public or private, owning, controlling, conducting, or managing a mining operation or proposed mining operation.

Your response stated that the operation is a 'joint venture or partnership'. Please register the joint venture or partnership with the Division of Corporations. We cannot issue one permit to two different operators for the same project.

R647-4-105 - Maps, Drawings & Photographs

General Map Comment:

The following needs to be shown (provided) on all maps: Map Title and number; a north arrow; map scale; Township, Range, and Section(s); permit (bonded) area. The map scale needs to be of sufficient size to measure the details accurately. For the location map, a scale of 1 inch to 2000 feet is recommended. For general maps (such as the soils map,

vegetation map, reclamation treatments map, drainage map, mine sequencing, etc.) a scale of 1 inch to 400 feet is recommended. For detailed maps (i.e. facilities), a scale of 1 inch to 200 feet is recommended. Maps need to be clear. Generally, Google Maps do not provide the clarity needed when they are enlarged to the appropriate scale.

105.1 Topographic base map, boundaries, pre-act disturbance

Provide a topographic base map (scale 1 inch=2000-feet) which shows property boundaries of surface ownership of the permit and adjacent areas; any perennial streams and other bodies of water; roads, buildings, electrical transmission lines, water wells, oil and gas pipelines, boreholes or other existing surface or subsurface facilities within 500 feet of the proposed operations; proposed or existing access routes from the nearest publicly maintained highway; and known areas which have been previously impacted by mining within the proposed disturbed area.

105.2 Surface facilities map

Provide a surface facilities map (scale 1 inch=200 feet) that shows all existing and proposed surface facilities, including buildings, stationary mining/processing equipment, roads, utilities, power lines, drainage control structures, topsoil storage areas, tailings or processed waste facilities, overburden disposal areas, and any solid and liquid wastes and wastewater discharge treatment and containment facilities. This map should also show the boundary of the proposed 5-year permit and bonded area. Identify and describe each of these facilities in the legend for this map.

105.3 Drawings or Cross Sections (slopes, roads, pads, etc.)

Drawings C-1 thru C-3 lack appropriate legends, scale, north-arrows, etc. Some are skewed, making them difficult or impossible to use. Cross sections (drawings C-4 thru C-11) also lack appropriate legends, scale, tick marks on axis, etc. Each cross section appears to be of a different scale than the others, making it difficult to correlate. Cross sections appear to show only two surfaces, existing and proposed. Please show existing topography, proposed mining topography and the proposed reclamation topography. Cross sections should all be of the same scale. Please keep horizontal and vertical scale the same. but if there is a vertical exaggeration of scale, please indicate the maximum slope angle on each line section. Please provide one long section that is parallel to the highwall and direction of mining advancement and a multiple cross sections that are perpendicular to the long section spaced every 400 feet. All cross sections need to begin before, and end after the proposed mining disturbance.

Drawings D-2 and D-3, storm water drainage, should show run-on and run-off patterns for flows entering or leaving the site. These drawings also need to show the watershed boundaries, surface controls, ponds, culverts, springs, etc. Also, please provide a copy of your approved Storm Water Pollution Prevention Plan.

R647-4-106 - Operation Plan

106.3 Estimated acreages disturbed, reclaimed, annually.

The property ownership map and description of properties (on pages 8-12 of the NOI) identify 100.87 acres. Page 15 of the NOI and your response to the Division's review state that there is 141.87 acres that will be affected by this mining operation. This is a difference of 41 acres. Please show where this acreage is and provide the mineral and landownership information.

Page 15 says 141.87 acres will eventually be affected by the mining operation, and states that no more than 50 acres will be disturbed at any one time. Please identify on an operations map the initial 50-acre block that will be mined and bonded, as well as the sequence or phasing of mining operations for the entire 141.87 acres. Currently there are 44 acres of disturbance and you plan to disturb an additional 4 acres annually. Please note, that until final reclamation is determined to be successful, all areas disturbed by mining (including areas that have been reclaimed) will be part of the disturbed and bonded area. Since vegetation must be established and have survived 3 growing seasons before the Division can give final release, the minimum acreage the Division can consider for your operation and bond is 56 acres. Please correct the appropriate references in the NOI.

Please provide specific maps and plans that show the current disturbance as well as the proposed (planned) mine development for the next 5-year period. Include changes to all mining related disturbances (clay pit, highwall, pit floor, stockpiles, topsoil stockpiles, roads, facilities, etc, and areas that will receive reclamation treatments).

106.5 Existing soil types, location, amount

The NOI says approximately 25,000 cubic yards of soil are necessary to revegetate 50 acres under the worst case scenario, but with a minimum of 6 inches of soil coverage, it would take in excess of 40,300 cubic yards of soil. Without soil survey and lab analysis, one cannot determine the extent of the soil resource (volume), the suitability of the soil for reclamation, or what, if any soil amendments or fertilizer may be needed to re-establish a vegetation cover. Therefore, please provide the following information regarding soil resources:

- Results of an Order 3 Soil Survey and soils map which classifies the different soil resources on site, including average depth of the A, B and C horizons, soil texture classification, and suitability class.
- A map (or maps) showing the locations of where soil materials have been salvaged from, where they will be salvaged from, and where soils will be applied during reclamation activities. This needs to include the proposed depth of soil salvage and the proposed depth of replacement. The soils map also needs to show the location(s) of where soil samples were taken.
- The results of a lab analysis of each soil type to be disturbed, which includes the following parameters: pH; sodium adsorption ratio; electrical conductivity; % organic matter; texture including coarse fragments; cation exchange capacity; total nitrogen; nitrate nitrogen; phosphorus (as P_2O_5) and potassium (as K_2O).

Once the soil resources are properly identified and quantified, it will be necessary to re-write the soils section of the NOI to conform with the soils data.

106.7 Existing vegetation - species and amount

While some vegetation information was provided, there was no discussion on how the data was obtained, or where the data was collected. It appears from the photos that the areas that were sampled were previously disturbed and are not representative of the premining vegetation.

106.8 Depth to groundwater, extent of overburden, geology

Appendix D shows a spring within the permitted area. Please describe how this spring will be protected from mining impacts. Given that there are several faults in the area, it is likely the spring is related to the faulting rather than a perched aquifer as you have suggested. To fully understand this spring, and potential impacts to groundwater, it is imperative that you provide basic geologic information for the permit area, including a description of the geology, a geologic map and cross sections.

R647-4-109 - Impact Assessment

General Impact Assessment comment:

Impacts to environmental resources currently exist, and will continue to exist at least until the site is fully reclaimed. Some impacts may be permanent, and appropriate mitigation is expected. Under each Rule below, please provide a discussion of the current and projected (or continued) impacts to the various environmental resources. If there is no impact to the resource, please provide an explanation as to why there is no impact on that particular resource.

109.1 Impacts to surface & groundwater systems

Please include a general narrative description identifying potential surface and/or subsurface impacts to the hydrologic resources. This description will include, at a minimum, projected impacts to surface and groundwater systems. Will the spring be impacted? What measures are being taken to assure the spring is not impacted, or provide appropriate mitigation for impacts to this spring?

109.2 Impacts to threatened or endangered species and their critical habitat

Please provide a list of threatened or endangered species that could potentially inhabit the permit area and a discussion regarding the likelihood (or lack thereof) of each species inhabiting the site. Include in this discussion the critical habitat needs of the species (the Utah Division of Wildlife Resources can provide this information).

109.3 Impacts to soil resources

Discuss the continued impacts to soil resources. Currently you state that 44 acres of potentially 141.87 acres have been disturbed by your operation. Impacts from mining on the additional 90-plus acres need to be addressed. Note, impacts from mining are significantly different than impacts from agriculture.

109.4 Impacts to slope stability, erosion control, air quality and safety

Final slope angles may not exceed 1h:1v or 45 degrees. The plan submitted in 2008 says that slope angles will be adjusted if it is determined a 1H:1V slope is unsafe. What criteria will be used to determine if the slope is unsafe? Rock-fall hazards should be included in any slope stability study?

Please discuss impacts caused by erosion and impacts to air quality (fugitive dust).

109.5 Actions to mitigate impacts

Please provide plans to mitigate the impacts listed above. Reference to sections of the NOI where detailed plans may be located is acceptable (i.e. Fugitive dust control plan, Air Quality Approval Order, Storm water control plan, Water Discharge Permits, Reclamation plan, letters from other Agencies, etc.).

R647-4-110 - Reclamation Plan

110.1 Current & post mining land use

Please incorporate the land use information into the NOI.

It is apparent that the intended post mining land use for this area is urban development. Before the Division will approve this alternative post mining land use, you will need to demonstrate that all local ordinances and zoning requirements are met, development plans are approved, and building permits are issued. This generally cannot occur until mining is completed or nearly so. You will also need to demonstrate how the proposed 1h:1v highwall slope is compatible with this use.

Until the alternative post mining land use is approved, the plan needs to show how the site will be returned to the pre-mining land use of grazing.

110.2 Reclamation of roads, highwalls, slopes, leach pads, dumps, etc.

Please provide specific plans on how 1h:1v slopes will be revegetated. Include in the plan soil replacement, soil amendments needed, and surface stabilization (i.e. use of mulch, tackifiers, etc.).

110.3 Surface facilities to be left.

The NOI indicates that only a fence at the top of the final slope will be left. Please provide plans for reclaiming all other facilities, including all roads, pads, dumps, and removal of all buildings and structures, or demonstrate how these facilities are needed for the post mining land use of grazing.

110.5 Revegetation planting program

Please provide a revegetation plan(s) for the entire area that will be affected by the mining operation. This plan must include at a minimum: soil replacement (and depth), soil amendments and fertilizers, if needed (note, until the soils information requested under R106-4-5 is provided, this cannot be completed), seedbed preparation, seed mix (es) to be used (include species and rate of seeding as pounds pure live seed per acre), the use of

mulch, tackifier, or other surface stabilization as needed, method(s) of seeding, and timing (late fall is usually best time to seed for revegetation success).

Please provide a reclamation map showing where different treatments, seed mixes, etc., will be used. As stated earlier, until the alternative post mining land use of urban development is approved, the plan needs to show reclamation of the entire area to restore the pre-mine use of grazing. This map should also show what areas that will be reclaimed on an annual basis as the operation progresses.

The proposed seed mix (provided by John Swain) does not meet the requirements to establish a diverse and permanent vegetation cover capable of meeting the post mining land use needs. Attached is a recommended seed mix that was designed to provide a permanent, diverse vegetation cover capable of meeting the post mining land use needs.

R647-4-113 – Surety

The operator has not provided sufficient detail to adequately calculate the cost of reclamation. However, the operator did provide a general cost estimate for reclamation (of $348,546). This amount should be posted as an interim surety. The final amount will be determined once the Division has sufficient detail in the reclamation plan. The operator will then need to adjust the surety (up or down) to comply with the final calculated amount.

Attachments: Vegetation data
Seed mix

Recommended Seed Mix for
Towers Sand and Gravel, LLC
Towers Sand and Gravel Quarry
M/057/0006

Common Name	Species Name	*Rate lbs/ac (PLS)
Crested wheatgrass	*Agropron cristatum*	1.0
Bluebunch wheatgrass	*Agropyron spicatum*	2.0
Western wheatgrass	*Agropyron intermedium*	1.5
'Bozoiski' russian wildrye	*Elymus junceus 'Bozoiski'*	1.0
'Piute' orchard grass	*Dactylis glomerata 'piute'*	0.5
Basin Wildrye	*Elymus cinereus*	1.5
'Ladak' alfalfa	*Medicago sativa 'ladak'*	0.5
Lewis flax	*Linum lewisii*	0.5
Palmer penstemon	*Penstemon palmeri*	0.5
Small burnet	*Sanguisorba minor*	0.5
Mountain big sagebrush	*Artemisia tridentata vaseyana*	0.1
Western yarrow	*Achillea millifolia*	0.2
Immigrant' forage kochia	*Kochia prostrata 'immigrant'*	0.5
bitterbrush	*Purshia tridentata*	1.0
	Total	11.3 lbs/ac

* This is a broadcast seeding rate of pounds pure live seed per acre.